USGS Mendenhall Postdoctoral Position

We seek a highly qualified post-doctoral scientist (Mendenhall Fellow) to do original research on how changes in fire frequency and altered climate act together to influence permafrost thawing, emissions of greenhouse gases, alteration of discharge pathways of surface water, etc. The policy implications of the research will be identified in terms of wildfire impacts on ecosystem services (i.e., the transformation of a set of natural assets into human benefits), including the potential disruption of native subsistence cultures. We hypothesize that the amount of carbon release from fires depends upon land cover type, burn severity, ground wetness, and the thickness and carbon density of the pre-fire organic matter layer. We will use data from multiple spatial and temporal scales to test this hypothesis and estimate the carbon release from wildfires. Historical wildfire records, reconstructed land cover history, soil, and permafrost data will be integrated into the General Ensemble biogeochemical Modeling System (GEMS) and the Erosion-Deposition Carbon Model (EDCM).

The postdoctoral scientist will be a part of the Yukon River Basin project, a major new activity of the USGS which integrates numerous agencies with an international component and which supports the International Polar Year (IPY). Results from this research will be used to assess the impacts of land surface disturbance and climate change at local to regional scales. This will assist policymakers and land managers to gauge the sensitivity of particular ecosystems and Alaskan communities to wildfires. This will also improve scientific understanding of feedbacks to climatic change.

Mendenhall Fellows are appointed to the USGS for two years and receive full salary and benefits at the GS-12 level. The 2006 base salary for a GS-12 is $62,291. The appropriate personnel office can provide the exact salary for other areas. Appointments will begin between October 2007 and March 2008, depending on availability of funds.

Application Closing Date: **November 15, 2006.**

Proposed Duty Station: Sioux Falls, SD

Qualifications: A Ph.D. in an ecological or natural science with a strong biogeochemical modeling capability is essential. Familiarity with remote sensing and geographic information systems is desired. In order to be considered for these opportunities, candidates must:

1. have successfully completed a Ph.D. in an area described in the Research Opportunity. The Ph.D. degree requirements must have been met **no earlier than November 15, 2001,** and must be completed by the time employment starts (**no later than March 2008**);
2. meet the qualification requirements described in the Research Opportunity at http://geology.usgs.gov/postdoc/2008/research.html.

How to Apply: please check http://geology.usgs.gov/postdoc/.

Research advisor contact: Larry L. Tieszen, (605) 594-6056, tieszen@usgs.gov; or Zhengxi Tan, (605) 594-6903, ztan@usgs.gov.

Personnel Office contact: Kathleen Scheich, (303) 236-9581, kscheich@usgs.gov

(This type of research is performed by those who have backgrounds for the occupations stated above. However, other titles may be applicable depending on the applicant's background, education, and research proposal. The final classification of the position will be made by the Personnel specialist)